Please find below and/or attached an Office communication concerning this application or proceeding.

H·A

	Application No.	Applicant(s)
Office Action Summary	09/522,185	LI ET AL.
	Examiner	Art Unit	
	David R Vincent	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _20 December 2004_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
     closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-94_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-94_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some *   c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
          application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
     Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Response to Arguments

1.   Applicant's arguments with respect to claims 1-94 have been considered but are moot in view of the new ground(s) of rejection.

Previously (in remarks filed 10/18/04) the applicant argued that "a packet based network, by definition, is asynchronous" (see remarks pg. 27), and in the present amendment (filed 12/20/04) the applicant amended the claims to specify that the claimed packet based network is asynchronous. In response to the applicant's remarks, the examiner asked the applicant to provide any documentation that was used in coming to this conclusion. In response, the applicant did not submit any documentation nor did the applicant point to any part of the specification or disclosure where the term asynchronous if further defined. The term asynchronous is now specifically claimed and the examiner would like to know where in the 116 page specification this term is further defined or receive documentation that can be used to clarify the meaning of the term (please see 37 CFR 1.105). The reason that examiner is repeatedly asking for this is because the examiner does not agree with the applicant's conclusion and cannot find a clear definition of the term in the specification.

It is the examiner's position that protocols such as HDLC (Arimilli: col. 6, lines 9-24) are full duplex synchronous packet protocols. Therefore the examiner disagrees with the applicant's assertion that a packet based network, by definition, is asynchronous. Furthermore, Arimilli discloses that <u>it is well known to use either synchronous or asynchronous</u> lines for communication and that "asynchronous data is by definition formatted by framing each character with a start and stop bit" (col. 5, lines 51-65). For at least the above cited reasons, the examiner concludes that there is, at the present time, no clear meaning of the term asynchronous (on the record) which the applicant claims and argues.

However, in order to advance the prosecution, the examiner has made a new grounds of rejection below. Meaning, since Arimilli is mainly interested in transmitting data over synchronous transmission networks (in order to gain efficiency, col. 5, lines 52-54) the examiner has combined Arimilli with Murphy to more clearly show transmitting over asynchronous networks.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically
disclosed or described as set forth in section 102 of this title, if the
differences between the subject matter sought to be patented and the prior
art are such that the subject matter as a whole would have been obvious at
the time the invention was made to a person having ordinary skill in the
art to which said subject matter pertains. Patentability shall not be
negatived by the manner in which the invention was made.

Claims 1-94 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Arimilli (US 6,515,984) in view of Murphy (US

2002/0036791).

As shown in e.g., Figs, 3-6C, 11-19, Arimilli discloses

voice exchange for exchanging voice signals between a network

line and a packet based network (voice data going from e.g.,

voice/fax channel to packet network 313, Fig. 3, 4A, 5A;

bidirectional voice, Fig. 6C), full duplex data exchanging

(using HDLC, Arimilli: col. 6, lines 9-24 which is a full duplex

protocol; real time bidirectional data, Figs. 5-6), demodulating

data (such as fax data) or data that was modulated using a voice

band carrier (pumping out data from fax demodulator, cols. 23-

24; col. 4, lines 46-65; demodulating from analog carrier, col.

7, lines 1-10; col. 22, line 65-col. 24, line 14), a call

discriminator (e.g., col. 9, lines 59-66; col. 10, lines 15-19),

jitter buffer (does not specifically disclose but implies using

since Arimilli discloses "speech sounds natural", col. 13, line

29-col. 14,line 14, especially col. 14, line 4), outputting

isochronous stream (real time data, e.g., col. 12, lines 1-3;

col. 14, lines 10-14), a plurality of signals and formats

(receiving and transmitting at least voice and fax from and to

both analog PSTN and digital leased lines, e.g., Fig. 6C and

respective disclosure), a first device being a DTMF telephone

(RX from PSTN, Fig. 6C); detecting inputs or formats (col. 7,

lines 47-58; col. 9, lines 59-67; col. 23, lines 40-64);

encoding voice data (col. 4, lines 46-65; col. 7, lines 11-27;

col. 12, lines 43-49; col. 14, lines 15-65); receiving from DTMF

circuit switched PSTN (col. 8); PCM data (col. 11, lines 50-67;

col. 14, lines 54-65); fax (e.g., col. 8); using computer

readable devices (e.g., col. 9); data pump or demodulating fax

data or data that was modulated using a voice band carrier

(pumping out data from fax demodulator, cols. 23-24; col. 4,

lines 46-65; demodulating from analog carrier, col. 7, lines 1-

10; col. 32, line 65-col. 24, line 14); selectively outputting

both the demodulated fax data and the encoded voice data (e.g.,

Figs. 2, 15-19; or col. 4, lines 30-46; outputting to digital

leased lines, col. 5, lines 9-13; col. 6, lines 9-14; composite

link, 315; muxing sporadic activity, col. 5, lines 40-51),

decoding from packet network (Fig. 6A, col. 7, lines 30-47;

input/output, 602, Fig. 6A; A/D and D/A, bi-directional, Fig.

6C; col. 6, lines 55-59), using packets (col. 5, lines 40-51);

using packet data networks (col. 9, lines 15-47, especially line

39; DDS network, Fig. 6B); buffering data (col. 6, lines 30-47;

604, Fig. 6A; 402, Fig. 6C; col. 14, lines 40-53); echo

cancellation (cols. 10-12, 15), rates and synchs (e.g., cols.

11-12, 15, 19-20), silence suppression, spoof data/muting (col.

20), voice activity detection (col. 12, lines 4-11; col. 20,

lines 10-25; 1205, Fig. 12; col. 15, line 49-col. 16, line 59),

using packets and frames (Figs. 15-19; col. 6, lines 9-65),

digital data/packet network (DDN, col. 9, lines 34-39), as

specified in claims in 1-3, 18, 20-28, 43, 45, 47-51, 58-59, 61,

66-68, 71-75, 82-83, 85-87, 90-91, 94.

Although Arimilli discloses that <u>it is well known to use</u>

<u>either synchronous or asynchronous</u> lines for communication (col.

5, lines 51-65), Arimilli fails to particularly call for

choosing asynchronous networks over synchronous ones. Therefore

it can be argued that Arimilli fails to call for outputting over

asynchronous networks. Arimilli also fails to particularly call

for voice activity detection (VAD) from the packet data network

(PDN) to the PSTN; inserting comfort noise, using the buffers

(col. 6, lines 30-47; 604, Fig. 6A; 402, Fig. 6C; col. 14, lines

40-53) for the purpose of jitter compensation, and adjusting

holding times in the jitter buffers.

Murphy teaches using asynchronous packet networks (12,

Figs. 2-3, 5-7, 31-34, packet network 10, Fig. 36; 56, Fig. 37;

376, Fig. 42; 494, Fig. 43; WAN/Internet, Figs. 15-16, 44-47,

and respective disclosure), voice activity detection from the

packet data network and suppressing/muting when no voice is

detected (claims 9-15, especially 9, 12), inserting comfort

noise, spoofing data (claims 9-14, especially claim 12), using

the buffers (claims 9-14) for the purpose of jitter

compensation, adjusting holding times in the jitter buffers

(claims 9-14, especially claim 10), specifically using IP

(sections 29 and 38-39, 119), detecting lost packets (claim 13-

14; using TCP involves detecting lost packets by merely

complying with the TCP retransmission part of the protocol,

section 65), as specified in claims 4-17, 19, 27-42, 44, 46, 52-

57, 60, 62-65, 67-70, 74-81, 84, 88-89, and 92-93.

Since Arimilli discloses using a variety of paths (col. 9,

lines 32-39), and that it is well known to use either

synchronous or asynchronous lines for communication and Murphy

teaches that asynchronous packet based networks such as the

Internet or WANs are well known, it would have been obvious to

allow the communications disclosed in Arimilli (e.g., 313, Fig.

3 or 5A and respective disclosure) to transverse the Internet.

By allowing the communications to be sent over the Internet,

data can be sent less expensively and reach more people, e.g.,

mobile/PDA users.

It would have been obvious to add the reverse path voice activity detection of Murphy since it is clear that data is being received from the packet network disclosed in Arimilli (Fig. 6A, col. 7, lines 30-47; input/output, 602, Fig. 6A; A/D and D/A, Fig. 6C; col. 6 lines 55-59), and because Arimilli discloses using protocols such as HDLC (Arimilli: col. 6, lines 9-24) which are full duplex. By detecting voice silence in both directions, and using the various buffers (e.g., col. 7, lines 1-27) to compensate for jitter and detecting lost packets, Arimilli could make the signals sound more natural or pleasing and Arimilli is clearly concerned with quality (cols. 13-14, especially col. 13, lines 39-40 and col. 14, lines 2-6).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David R Vincent whose telephone number is 703 305 4957. The examiner can normally be reached on M-TH.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Olms can be reached on 703 305 4703. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be
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Business Center (EBC) at 866-217-9197 (toll-free).

David R Vincent
Primary Examiner
Art Unit 2661

January 21, 2005